

R&R



REASON & REVELATION

A Monthly Journal of Christian Evidences

JANUARY 2019 • VOL. 39 • NO. 1

21 Reasons To Believe The Earth Is Young

R&R and Discovery
Bound Volumes



21 Reasons to Believe the Earth is Young

Jeff Miller, Ph.D.

Article In Brief...



The Bible implies that the Earth is around 6,000-10,000 years old, while the conventional belief held by many is that the Earth is 4.5 billion years old. Is the Bible wrong about the age of the Earth? Abundant evidence exists from the disciplines of paleontology, archaeology, geology, astrophysics, and geophysics which supports the biblical time frame, while refuting deep time.

THE age of the Earth, according to naturalists and old-Earth advocates, is 4.5 billion years.¹ Young-Earth creationists contend that the Earth is on the order of thousands, not billions, of years old. Is there evidence to support the young-Earth creationists' premise?

First, as we have shown elsewhere, the biblical narrative implies that the Universe was created with an immediate **appearance** of age in many ways.² Adam and Eve were not mere zygotes, but walking, talking, working, and procreating individuals. The trees of the Garden were bearing fruit so that Adam and Eve could eat from them, light from distant stars was viewable on Earth, and daughter elements³ were possibly in the various rocks. That said, while certain attributes of the Earth would appear old, the biblical model suggests that other features

of the Universe would highlight its youth. Here are 21 such examples:

BIBLE

#1: Bible Teaching

If the Bible is the inspired Word of God, then whatever it teaches can be known to be true—including what it teaches about the age of the Earth. The evidence indicates that the Bible is in fact God's Word.⁴ Simple addition of the genealogies in Genesis 5 reveals that from Creation to the Flood was 1,656⁵ years, give or take a few years.⁶ The genealogies of Genesis 11, which do not use precisely the same terminology as that of Genesis 5,⁷ account for roughly 400 to 5,000 years, ending with the birth of Abram.⁸ From Abram to Christ is roughly 2,000 years, and from Christ to present day is roughly 2,000 years. Therefore, the age of the Earth is 6,000-10,000 years.

PALEONTOLOGY/ARCHAEOLOGY

#2: Polystrate Fossils

Perhaps the most widely used argument for a millions-of-years-old Earth historically has been the rock layers of the geologic column. It would take millions of years for the thousands of meters of material beneath us to accumulate and lithify—or so the argument goes. Is that true? A polystrate fossil is a single fossil that spans more than one geologic stratum. Many polystrate tree trunk fossils have been discovered, as well as a baleen whale, swamp plants called calamites, and catfish.⁹ Polystrate fossils prove that both the rock layers of the geologic column and the surfaces between them do not require millions of years of slow and gradual accumulation and lithification. After all, how could a tree escape its inevitable decay while sticking out of the ground for millions of years with its roots dead and lithified, while it waited to be slowly covered with sediment? Polystrate fossils provide evidence that the rock strata have formed rapidly—fast enough to preserve organic materials before their decay.

#3: DNA in "Ancient" Bacteria Support a Young Earth

In 2000, a bacterium was discovered that is thought to be from the Permian Period of Earth's history—250 million years ago. The problem is that, according to microbiologist of the University of Bristol John Parkes, "[a]ll the laws of chemistry tell you that complex molecules in the spores should have degraded to very simple compounds such as carbon dioxide" in that amount of time,¹⁰ and yet the bacterium's DNA was still intact. Further, the "Lazarus" bacterium actually revived in spite of its supposed great age. Not only was the bacterium revived, but analysis of its

DNA indicated that the bacterium is similar to modern bacteria—it had not evolved in “250 million years.”¹¹ Critics verified that the DNA of the bacterium does in fact match that of modern bacteria, but respond that “unless it can be shown that [the bacterium] evolves 5 to 10 times more slowly than other bacteria,” the researchers’ claims should be rejected.¹² So according to critics, the evidence does not match the “theoretical expectations for ancient DNA” predicted by the evolutionary model. Therefore, the bacterium cannot be ancient regardless of the evidence.¹³ Another plausible option: the bacterium is not 250 million years old.

#4: Human Population Statistics

Evolutionists argue that humans (i.e., the genus *homo*) have been on the Earth for roughly two to three million years. Using statistics, one can arrive at an estimate for how many people would be predicted to be on the Earth at different points in history. For example, accounting for factors such as war, disease, and famine, and assuming humans have been on the planet for only one million, rather than two to three million, years, we find that there should be $10^{2,000}$ people on the planet today.¹⁴ There are, however, not even 10^{10} people on the Earth. In fact, if three-foot-tall humans with narrow shoulders were squeezed into the Universe like sardines, only 10^{82} people could fit into the entire Universe. It would take $10^{1,918}$ (minus one) other Universes like ours to house that many humans.

It might be tempting to argue that the Earth could only sustain roughly 50 billion people, resource-wise, and therefore, all humans above that number would die off. If that were the case, however, there should be evidence that the Earth’s resource capacity had been met many times in

the past in the form of billions upon billions of hominid fossils. Hominid fossils, however, are acknowledged to be “hard to come by.”¹⁵ In fact, “meager evidence” exists to attempt to substantiate the origin of the entire genus *homo*.¹⁶ Even after over a century of searching for *homo* fossils, one evolutionary scientist admitted several years ago, “The fossils that decorate our family tree are so scarce that there are still more scientists than specimens. The remarkable fact is that all the physical evidence we have for human evolution can still be placed, with room to spare, inside a single coffin.”¹⁷ Is belief in an old Earth reasonable or irrational? Ironically, if our calculations are adjusted based on the predictions of the biblical model, roughly 4,350 years ago¹⁸ a Flood ensued that wiped out man from the face of the Earth. If the planet then began to be repopulated by six people (namely the sons of Noah and their wives), statistics show that there should be roughly 6.7 to 8.1 billion people on the planet today. As of today, the U.S. Census Bureau documents that the world’s population is 7.5 billion people.¹⁹

#5: Carbon-14 in “Ancient” Fossils and Materials

At current rates, it takes 5,730 years for half of the radioactive element carbon-14 (C-14), from an organic sample like a bone or piece of wood, to break down into its daughter element, nitrogen-14. With such a “short” half-life, after 57,300 years (10 half-lives), less than 0.1% of the original C-14 atoms are left in any specimen. Current technology does not allow scientists to detect C-14 in specimens thought to be older than 60-100 thousand years in age—all of the measurable carbon-14 is gone.²⁰ If C-14 is detected in any uncontaminated specimen, therefore, the specimen cannot be older than 100,000 years (assuming, as evolutionists do, a constant nuclear decay rate of C-14 into nitrogen-14—an assumption which would not hold in the biblical Flood scenario). The discovery of C-14 in fossils that are believed to be 10’s to 100’s of millions of years old is, predictably, shocking to those who accept the conventional dating scheme and its underlying techniques. No matter how much care is taken to ensure that the

Reason & Revelation is published monthly by Apologetics Press, Inc. Periodicals postage paid at Montgomery, AL. **Postmaster:** Send address changes to **Reason & Revelation**, 230 Landmark Dr., Montgomery, AL 36117; **ISSN:** [1542-0922] **USPS#** 023415.

Apologetics Press is a non-profit, tax-exempt work dedicated to the defense of New Testament Christianity. Copyright © 2019. All rights reserved.

Editor:

Dave Miller, M.A., M.Div., M.A.R., Ph.D.*
(*Communication, Southern Illinois University)

Associate Editor:

Jeff Miller, M.S., Ph.D.*
(*Biomechanical Engineering, Auburn University)

Annual Subscription Rates:

\$14.00	Domestic
\$12.00	Domestic Bulk (5+ to same address)
\$14.00	Canada & Overseas (plus shipping)

General inquiries, changes of address, or international callers:

Phone: (334) 272-8558
Fax: (334) 270-2002

Orders:

Phone: (800) 234-8558
Fax: (800) 234-2882

On-line Web store/catalog, subscription order/renewal form, current issues, archives, and other information (all orders processed on a secure server):

URL: www.ApologeticsPress.org
URL: espanol.ApologeticsPress.org/espanol
E-mail: mail@ApologeticsPress.org

Discovery—Scripture & Science for Kids is a sister publication for children. For more information, please contact our offices or visit the Discovery Web site at:
URL: www.DiscoveryMagazine.com

specimens have not been contaminated, the fossils still reveal the presence of C-14. Fossilized wood from the Cenozoic era (up to 65 million years old, conventionally), fossilized wood, dinosaur fossils, and ammonite shells from the Mesozoic era (66-252 million years old, conventionally), and fossilized wood, reptiles, and sponges from the Paleozoic era (252-541 million years old) have been discovered with C-14 present.²¹ Similarly, coal from the Paleozoic era (thought to be 40-320 million years old), and even diamonds thought to be billions of years old, have yielded C-14 upon examination.²² It is notable that regardless of where the specimens are found in the geologic column, the C-14 ages all fall within the range of 10-60 thousand years old (again, assuming a constant nuclear decay rate). While one might predict that deeper in the strata would correspond to an older age, the depth in the strata does not appear to correlate to the measured age of the specimen, supporting the creationist contention that the entire fossil record and geologic column from the Paleozoic up into the Cenozoic era likely formed during the single year of the biblical Flood. The geologic column and fossil record are not a record of life through time, but of death during the Flood a few millennia ago.²³

#6: Soft Tissue/Blood Vessels in Dinosaur Fossils

The last uncontested dinosaur fossil is found in the Cretaceous period of the geologic column, below the K-Pg boundary that marks a mysterious extinction event that wiped out some 70% of the planet's species. The dinosaur era (i.e., the Mesozoic) extends from roughly 252 million years ago to the K-Pg boundary, roughly 65-66 million years ago according to the evolutionary timescale. Obviously, no flesh

could conceivably survive 100,000 years without decay, much less one million years, much less 65 million years, much less 200 million years. As of 2005, however, many dinosaur fossils have been "cracked open" and studied, only to find collagen and blood vessels with red blood cells intact, original proteins, and soft, stretchy, flexible tissue. The list has grown to include *T-rex*, *hadrosaur*, *mosasaur*, *triceratops*, *thescelosaurus*, *psittacosaurus*, *archaeopteryx*, and *seismosaur* fossils.²⁴ While certain sterile conditions could conceivably preserve organic remains for hundreds or thousands of years, the fossils being studied were not discovered in sterile, laboratory environments, but rather harsh environments like the mid-western U.S., with large temperature differentials, erratic weather, and climate conditions that accelerate decay. No reasonable explanation has been offered, and yet the evidence has continued to mount.²⁵ The most plausible explanation is that the geologic strata that host the dinosaurs do not date to 66+ million years ago, but rather, to a few thousand years ago.

#7: Human/Dinosaur Co-existence

According to the evolutionary, old-Earth timeline, dinosaurs went extinct some 65 to 66 million years ago. Modern-day mammals and many other living organisms did not yet exist, since they are not found in the strata that house the dinosaurs. Humans (i.e., the genus *homo*) only arrived on the scene two to three million years ago according to that paradigm. No human, therefore, ever saw a dinosaur. If, however, evidence was discovered that proves humans and dinosaurs in fact co-existed in the recent past, then the evolutionary timeline telescopes down millions of years and the geologic strata in which the dinosaurs

are found are shown to represent a time period in the not-too-distant past. Sure enough, physical, historical, and biblical evidences are available to substantiate the co-existence of humans and dinosaurs in the recent past.²⁶

GEOLOGY

#8: Tightly Folded Rock Strata

If the rock layers of the geologic column represent millions of years of slow accumulation, lithification, and erosion, one would expect the layers beneath the surface layer to be "brittle," as rock layers are today. Plate movement would, therefore, result in the fracturing of those rock layers, rather than bending them—rocks do not bend, but rather, break. In several places on the Earth, however, rock layers have been discovered that are bent and folded at radical angles without fracturing (e.g., the Tapeats Sandstone and Muav Limestone of the Grand Canyon²⁷). These thick layers of sediment that eventually lithified—representing millions of years of time, conventionally—must have been laid down rapidly and had not yet had enough time to lithify before being bent by the rapid plate movement predicted to occur during the Flood.

#9: Rapid "Slow" Processes

Any old-Earth/evolutionary dating technique relies on the uniformitarian assumption: whatever processes we witness occurring today must be used to explain the past. If petrifying a tree, forming oil, carving a canyon, transforming the parent isotopes of a radioactive rock into their daughter elements, or moving a continent several miles would take millions of years at the lithification, transformation, erosion, decay, and "drift" rates we see today, then the Earth must be at least millions of years old. If, however, each of these

processes are shown to occur rapidly under catastrophic conditions (as predicted by the young-Earth biblical model), then those processes cannot be used to prove an old Earth. Sure enough, as creationists have predicted would be the case, each of these processes has been empirically verified as occurring rapidly under catastrophic conditions like those of the biblical Flood model. Petrification has been found to be able to occur in mere months to a few years under catastrophic conditions.²⁸ Oil has been shown to form in hundreds to thousands of years.²⁹ The rapid carving of canyons has been verified to occur under catastrophic conditions as well.³⁰ Studies have verified that the nuclear decay rates of radioactive materials can be accelerated under catastrophic conditions,³¹ and evidence for the rapid movement in the past of the plates upon which the continents reside has been verified as well.³² If each of the chronometers that are said to prove “old” ages of the Earth is contradicted by the evidence, then where is the evidence of an old Earth?

#10: Amount of Salt in the Sea

Ocean water is salty. Each year, hundreds of millions of tons of sodium are added to the oceans and only about 27% of it is removed by other processes, leaving an annual accumulation of 336 million tons of sodium.³³ Starting with a zero sodium content in the sea and using the old-Earth assumption of uniformitarianism, the current concentration of sodium in the ocean would be reached in only 42 million years. According to the U.S. National Oceanic and Atmospheric Administration, however, the ocean is 3.8 billion years old.³⁴ The response to this fact, as must be the case in other examples in this list, would obviously be that accumulation and/or

dissemination rates must have been different in the past. The average salt accumulation, however, would have to be over 90 times slower than present rates in order to accommodate the alleged age of the ocean. This conjecture simply does not hold up under scrutiny and, even if it did, it would merely prove the creationist contention that **uniformitarianism is not a reliable assumption**. Present processes are not the key to understanding the past and, therefore, no old-age dating technique can be trusted, since they all rely on uniformitarianism. Since the Flood happened, catastrophism, not uniformitarianism, is a more reasonable assumption in interpreting physical evidence. Intimately tied to catastrophism are rapid processes and, therefore, young ages.

#11: Amount of Sediment on the Sea Floor

As water and wind scour the continents each year, 20 billion tons of material is estimated to be deposited in the oceans.³⁵ As the tectonic plates of the Earth move, subduction occurs, with one plate slowly diving under another towards the mantle. One billion tons of material is estimated to be removed from the sea floor each year from that process,³⁶ leaving 19 billion tons of sediment accumulating each year on the ocean floor. On average, the sediment thickness on the ocean floor is 1,500 feet.³⁷ Based on the current rate of sediment deposition, however (i.e., assuming uniformitarianism once again), the sediment on the ocean floor would accumulate in only a small fraction of the alleged 3.8 billion year age of the ocean (i.e., 0.5% or 19 million years).³⁸ The average annual sediment accumulation would have to be 197 times smaller to match an ocean age of 3.8 billion years. The amount of sediment on the sea floor simply does not support a billions-of-years-old

ocean, but fits well with a young Earth when the accelerated erosion rates during and immediately after the Flood are accounted for.

#12: Lack of Erosion Evidence Between Strata

When making a multi-layer cake, the adjoining surface between layers is smooth. If you made your cake outside over several weeks, waiting several days between new layers and leaving the cake open to the elements in the meantime, the surface of each layer would exhibit the indicators of time—decay, loss of cake from scavengers, erosion from rain water, etc. Similarly, if geologic strata are formed over millions of years, the surface between adjoining layers would not be smooth, but would exhibit proof of time passing in the form of, for instance, erosional and depositional surfaces. However, the layers, by in large (e.g., at the Grand Canyon), display smooth contact surfaces—indicating rapid deposition without enough time for erosion.³⁹ Those surfaces which show evidence of erosion match the type of erosion that would be predicted if the lower surface had not yet lithified when a rapid erosion event occurred above the surface, prior to further rapid deposition. Bottom line: the Grand Canyon exhibits evidence of a young Earth.

#13: Helium in Zircon Crystals

Zircon crystals are considered to be some of the oldest minerals on Earth—thought to be billions of years old. They are very hard and resistant to deterioration, and are also able to preserve their contents well, making them safer from contamination. Within zircon crystals, a portion of the zirconium atoms are replaced by uranium while the crystals grow. As radioactive uranium-238 decays into its daughter element, lead-206, alpha particles

(cont. on p. 8)

R&R and Discovery 2018 Bound Volumes

Save the volumes from the past

R&R 1998-2017
Starting at \$3.00 ea.

Discovery 1999-2017
Starting at \$3.00 ea.

\$14.00
* Plus shipping
Taxes apply in Alabama



RR
2018

BOUND VOLUME XXXVIII

230 Landmark Drive, Montgomery, Alabama 36117
ApologeticsPress.org



Reason and Revelation:

Twelve issues containing articles on Did Paul Endorse Slavery? Teleological Argument for the Existence of God; Is Conception When Life Begins? Are Jesus' Words More Important than the Bible Writers? Bible Inspiration, and more.

2018 BOUND VOLUMES

Hold on to the knowledge

Discovery
Scripture & Science for Kids

\$14.00
Plus shipping
Taxes apply in Alabama

FEBRUARY

JULY

OCTOBER

JUNE

AUGUST

2018

Discovery:
Bible and Science
magazine for kids

Order today by calling
(800) 234-8558
or by visiting
ApologeticsPress.org/webstore

are released that combine with nearby electrons. Helium is subsequently formed, which can then be detected in zircon crystals. While zircon crystals are able to preserve their contents well, helium is known to behave as a “slippery” material. Helium atoms are small and are in constant motion as gas particles. They are, therefore, hard to contain, and they diffuse quickly.⁴⁰ Upon examination of zircon crystals that are thought to be 1.5 billion years old, however, scientists have discovered the presence of unusually high concentrations of helium.⁴¹ If the crystals were billions of years old, the helium should have been diffused from the crystals and released into the atmosphere, since high concentrations of helium can only be sustained, theoretically, for a few thousand years without significant diffusion. The presence of high concentrations of helium illustrates the fact that at some point(s) in the relatively recent past, the nuclear decay rate of uranium-238 was accelerated, producing larger amounts of helium that have not yet had time to diffuse. If radioactive decay rates were accelerated at some point in the past (e.g., during the Flood), then radioactive materials will appear deceptively old, while actually being relatively young.

#14: “Orphan” Radiohalos

As a radioactive atom of uranium decays into polonium within a solid crystalline material, alpha particles are released and “halos”⁴² form, marking the different stages of nuclear decay. Parentless radiohalos, however, are found in many granitic rocks, implying accelerated nuclear decay in the past and a young age for the Earth.⁴³

#15: Clastic Dikes

In sedimentary rock strata, open fractures often exist, and in some cases, other sedimentary material is

injected into those cracks at a later time, filling them with a different type of sedimentary rock. These are called clastic dikes. The Ute Pass fault, west of Colorado Springs, for example, exhibits over 200 sandstone dikes, some of which are miles in length. The dikes are comprised of Cambrian Sawatch sandstone (allegedly 500 million years old) that injected rock from the Cretaceous period (allegedly 65-66 million years old).⁴⁴ Is it reasonable to presume that 500-million-year-old sediment remained unlithified for over 400 million years while Ordovician, Silurian, Devonian, Carboniferous, Permian, Triassic, Jurassic, and Cretaceous strata were laid down on top of it before intruding into the Cretaceous strata? Or is it more reasonable to infer that the layers of the geologic column from the Cambrian to the Cretaceous were laid down rapidly on top of one another during a global, aqueous catastrophe before they had lithified? Then, during the rapid uplift of the Rocky Mountains later in the Flood, the Cambrian Sawatch material was injected through the overlying layers forming the clastic dikes of the Ute Pass. Bottom line: the geologic column was formed rapidly—the Earth is young.

ASTRONOMY/ASTROPHYSICS/ GEOPHYSICS

#16: Faint Young Sun Paradox

As the hydrogen within the Sun fuses into helium, the Sun gradually increases in temperature. Calculations show that (at current rates) 3.5 billion years ago, the Sun would have been 25% dimmer and would have heated the Earth less, dropping Earth’s temperature some 31°F. Earth would have been below freezing!⁴⁵ According to contemporary thinking, however, Earth, initially molten, was **hotter**, not colder,

prior to 3.5 billion years ago, and was gradually cooling, not heating up.⁴⁶ Not only is there no evidence that Earth was ever frozen, but if it had been frozen 3.5 billion years ago and beyond, according to evolutionists, life could not emerge 3.5-4 billion years ago since it relies on **liquid** water.

#17: Rapid Decay Rate of Earth’s Magnetic Field

Scientists have been measuring the strength of the Earth’s magnetic field with precision since 1835. The magnetic field is decaying at an exponential rate with a half-life of roughly 1,100 years.⁴⁷ By implication, when we follow the exponential function back in history, doubling the Earth’s magnetic field intensity every 1,100 years, we reach a point 30,000 years ago when the Earth’s magnetic field strength would have been comparable to that of a neutron star,⁴⁸ creating immense heat that would have prohibited life from existing and possibly even compromised the internal structure of the Earth. The Earth cannot be millions of years old.

#18: Lunar Recession Rate

The Moon is presently moving away from the Earth at a rate of approximately 4 cm per year.⁴⁹ The recession rate is not linear. As the Moon moves further from the Earth, it recedes slower. Based on the equation that describes the Moon’s recession rate, scientists can calculate where the Moon would have been compared to the Earth at different times in history. For example, 6,000 years ago, the Moon would have been 750 feet closer to the Earth than it is today—resulting in little effect on the Earth. If, however, the Moon has the contemporary age of 4.5 billion years old, there is a significant problem, because 1.55 billion years ago the Moon would

have been touching the Earth.⁵⁰ It would be physically impossible, therefore, for the Moon to be older than 1.55 billion years old based on the known recession rate of the Moon. In response, those who wish to maintain the contemporary belief in deep time must argue that present recession rates did not hold in the past.⁵¹ In so doing, however, they abandon uniformitarian thinking (i.e., “the present is the key to the past”) which undergirds every deep time dating technique. They are, therefore, once again admitting that every evolutionary dating technique is suspect and does not prove an old Earth.

#19: Atmospheric Helium Content

Helium is gradually accumulating in the Earth’s atmosphere as radioactive isotopes beneath the Earth’s surface decay, emitting alpha particles that attract electrons and form helium. The amount of helium in the atmosphere has been measured, the rate at which helium is introduced in the atmosphere has been measured, and the theoretical rate of helium release to space has been calculated as well. Using the typical old-Earth assumption of uniformity over time, it is easy to calculate an upper limit on the age of the atmosphere. The atmosphere can be no older than two **million** years—as opposed to the alleged age of 4.5 **billion** years.⁵²

#20: Spiral Galaxies

Earth is located in the Milky Way Galaxy—a spiral galaxy. According to the Big Bang model, galaxies began forming within a billion years after the Big Bang, making many of them over 12 billion years old. Of all of the galaxies that scientists have observed, some 77 percent of them are spiral galaxies.⁵³ The oldest spiral galaxy is thought to be roughly 11 billion years old.⁵⁴ If you have

ever sprinkled cinnamon on a hot, foamy drink and then stirred the drink with a straw or stick, you will notice the formation of the characteristic spiral galaxy shape. You may also notice that the portion of the spiral that is closer to the center rotates faster than the portion of the spiral that is close to the edge of the cup. That “differential rotation” causes the arms of the spiral to begin blurring closer to the center of the spiral over time. After a few rotations, the center of the spiral is no longer recognizable. Similarly, spiral galaxies are spinning slowly. If spiral galaxies are as old as is claimed by secular cosmologists, after a few hundred million years the arms of the spirals should no longer be recognizable—and yet many of them are. *Space.com* admits: “The exact mechanism for the formation of the spiral arms continues to puzzle scientists. If they were permanent features of the galaxy, they would soon wind up tightly and disappear in less than a billion years.”⁵⁵ Apparently, the observational evidence does not harmonize with the deep time proposition of the Big Bang model.

#21: Comet Contradiction

The solar system is comprised of hundreds of thousands of objects that are orbiting the Sun. Over 3,000 of those objects are comets.⁵⁶ Comets are balls of ice and dirt moving through space in elliptical orbits around the Sun. They are believed to be “leftovers from the material that initially formed the solar system about 4.6 billion years ago.”⁵⁷ As comets in their orbit move close to the Sun, solar winds and radiation from the Sun “blow” material from the comet, creating the characteristic tail we observe. Since material is removed from a comet with each cycle around the Sun, obviously the comet will eventually disintegrate—completely

sublimating. The typical lifespan of a comet is 10,000 years.⁵⁸ How, then, can the solar system be 4.6 billion years old if thousands of comets—thought to have formed when the solar system formed—are still orbiting the Sun? Scientists speculate the existence of a source for new comets that lies outside of the solar system, but no observational evidence has substantiated that claim. The biblical model, of course, provides a plausible explanation that harmonizes with the evidence: the solar system is less than 10,000 years old.

CONCLUSION

This list is but a small sample of the available evidences for a young Earth. Keep in mind that the assumption of uniformitarianism undergirds many of the arguments in this list. Uniformitarianism is a fundamental assumption of **evolutionary dating techniques**, not of the biblical Creation model. The creationist would argue that uniformitarianism is extremely unreliable due to the effects of catastrophic phenomena (especially that of the Flood; cf. 2 Peter 3:3-6). The biblical Creation perspective advocates, instead, catastrophism as the reliable way to interpret scientific evidence from the past. By illustrating that uniformitarianism simultaneously proves a young Earth (according to the examples above) and disproves a young Earth (according to standard evolutionary dating techniques), the unreliability of uniformitarianism is substantiated. The old-Earth advocate is forced to abandon uniformitarianism, or be guilty of holding to it blindly without evidence of its reliability. In abandoning uniformitarianism, however, the person who believes in an old Earth has now yielded his primary evidence for an old Earth and must embrace the contention that one simply

cannot know the age of the Earth using science. We would concur with that conclusion, but remind the old-Earth advocate that while science cannot provide the age of the Earth, there is another source of information that can provide its age. Recall the first point in our list: since we can know that the Bible is from God, what it says is true. It gives us enough information to know the relative age of the Earth, on the order of thousands, not billions, of years.

There is never a reason to doubt the Bible. True science will always support it. If the Bible indicates that the Earth is young, then a fair, thorough assessment of the evidence will substantiate that truth, even if assessing the evidence requires time and effort. That evidence is readily available.

ENDNOTES

- ¹ For a response to old-Earth dating techniques, see Jeff Miller (2013), "Don't Assume Too Much: Not All Assumptions in Science Are Bad," *Reason & Revelation*, 33[6]:62-70.
- ² Eric Lyons (2011), "Common Sense, Miracles, and the Apparent Age of the Earth," *Reason & Revelation*, 31[8]:77-80.
- ³ In radioactive decay, a radioactive element (the parent) decays into another element (the daughter) over time. When dating a rock, geologists assume that there was initially no daughter elements present in the rock—only parent elements when the decay began. That assumption is then used to determine, at today's decay rates, how long it would take for the rock to have the quantity of daughter element that it currently contains.
- ⁴ Kyle Butt (2007), *Behold! The Word of God* (Montgomery, AL: Apologetics Press).
- ⁵ Assuming the Masoretic text is correct (as opposed to the Septuagint or Samaritan Pentateuch).
- ⁶ Unless Adam had Seth on Adam's birthday, Seth had Enosh on Seth's birthday, Enosh had Cainan on Enosh's birthday, etc., each patriarch's age is being rounded by, potentially, a few months.
- ⁷ Eric Lyons (2002), "When Did Terah Beget Abraham?" Apologetics Press, <http://apologeticspress.org/apcontent.aspx?category=13&article=624>.
- ⁸ The genealogy terminology of Genesis 11

is not precisely the same as that of Genesis 5. As highlighted in Lyons, 2002, the patriarch years before the birth of the next patriarch could refer to the number of years up to the firstborn son (similar to Moses' terminology in the same context concerning Shem and Abram). If so, then the number of years between the firstborn's birth and the ancestor of Christ listed is unknown. If each patriarch listed is a firstborn son, then simple math yields roughly 390 years from Shem to the birth of Abram, Nahor, and Haran. If, however, there is a span of time between the date of the firstborn son and the actual ancestor of Christ (who may not have been the firstborn), the time between Shem and Terah's sons grows. As an upper limit, if every patriarch in Genesis 11 continued to live to 900 years (like the patriarchs of the pre-Flood world, Genesis 5), then the "missing" years add up to a potential addition of 4,410 years (an extreme, unlikely scenario). Upper and lower limits, therefore, are placed on the potential length of time between the Flood and the birth of Terah's children: between 390 and 4,800 years.

- ⁹ Michael J. Oard and Hank Giesecke (2007), "Polystrate Fossils Require Rapid Deposition," *CRS Quarterly*, 43[3]:232-240, March; John Morris (2011), *The Young Earth* (Green Forest, AR: Master Books), pp. 102-105; Andrew Snelling (1995), "The Whale Fossil in Diatomite, Lompoc, California," *Creation Ex Nihilo Technical Journal*, 9[2]:244-258.
- ¹⁰ As quoted in Andy Coghlan (2000), "Eternal Life," *New Scientist*, On-line, October 18, <https://www.newscientist.com/article/dn82-eternal-life/>.
- ¹¹ Russell Vreeland, William Rosenzweig, and Dennis Powers (2000), "Isolation of a 250 Million-Year-Old Halotolerant Bacterium from a Primary Salt Crystal," *Nature*, 407:897-900, October 19.
- ¹² D.C. Nickle, G.H. Learn, M.W. Rain, J.I. Mullins, and J.E. Mittler (2002), "Curiously Modern DNA for a '250 Million-Year-Old' Bacterium," *Journal of Molecular Evolution*, 54[1]:134-137.
- ¹³ Ibid.
- ¹⁴ Jeff Miller (2011), "Population Statistics and a Young Earth," *Reason & Revelation*, 31[5]:41-47, http://apologeticspress.org/pub_rar/31_5/1105w.pdf.
- ¹⁵ Mariette DiChristina (2012), "The Story Begins," *Scientific American*, 306[4]:4, April.
- ¹⁶ Kate Wong (2012), "First of Our Kind," *Scientific American*, 306[4]:31, April.
- ¹⁷ Lyall Watson (1982), "The Water People," *Science Digest*, 90[5]:44, May.
- ¹⁸ Keep in mind that the Flood could have been a few hundred years further back in history than 4,300 years ago.
- ¹⁹ "U.S. and World Population Clock"

(2018), *United States Census Bureau*, November 2, <https://www.census.gov/popclock/>.

- ²⁰ Sarah Zielinski (2008), "Showing Their Age," *Smithsonian Magazine.com*, July, <https://www.smithsonianmag.com/history/showing-their-age-62874/>.
- ²¹ Andrew Snelling (2011), "Carbon-14 in Fossils and Diamonds," *Answers Magazine*, On-line, January 1, <https://answersingenesis.org/geology/carbon-14/carbon-14-in-fossils-and-diamonds/>; Brian Thomas and Vance Nelson (2015), "Radiocarbon in Dinosaur and Other Fossils," *Creation Research Society Quarterly*, 51[4]:299-311.
- ²² Don DeYoung (2008), *Thousands... Not Billions* (Green Forest, AR: Master Books), pp. 45-62.
- ²³ Note that radiocarbon dating does, in fact, sometimes result in ages of materials that exceed 10,000 years. Radiocarbon dating, however, is understood to be suspect for objects thought to be older than roughly 3,000-4,000 years old [cf. George H. Michaels and Brian Fagan (2013), "Chronological Methods 8—Radiocarbon Dating," University of California Santa Barbara Instructional Development, http://archserve.id.ucsb.edu/courses/anth/fagan/anth3/Courseware/Chronology/08_Radiocarbon_Dating.html]. Further, biblical creationists argue that radioactive decay rates were apparently accelerated during the Flood and afterward, possibly up to 1,500-1,000 B.C., making all dating techniques unreliable for ages beyond that time. See DeYoung for evidence of accelerated radioactive decay in the past.
- ²⁴ Kevin Anderson (2017), *Echoes of the Jurassic* (Chino Valley, AZ: CRS Books); Brian Thomas (2015), "Solid Answers on Soft Tissue," *Answers Magazine Online*, January 1, <https://answersingenesis.org/dinosaurs/when-did-dinosaurs-live/solid-answers-soft-tissue/>.
- ²⁵ Cf. *Creation Research Society Quarterly* (2015), 51[4] and Anderson for in-depth discussion and responses to proposed explanations.
- ²⁶ Eric Lyons and Kyle Butt (2008), *The Dinosaur Delusion* (Montgomery, AL: Apologetics Press).
- ²⁷ Andrew A. Snelling, "Rock Layers Folded, Not Fractured," *Answers* 4, No. 2 (April-June 2009):80-83; Morris, pp. 108-113.
- ²⁸ H. Akahane, et al. (2004), "Rapid Wood Silicification in Hot Spring Water: An Explanation of Silicification of Wood During the Earth's History," *Sedimentary Geology* 169(3-4):219-228, July 15; Alan Channing, Alan and Dianne Edwards (2004), "Experimental Taphonomy: Silicification of Plants in Yellowstone Hot-Spring Environments," *Transactions of the Royal Society of Edinburgh: Earth*

- Sciences*, 94:503-521, <http://www.rcn.montana.edu/Publications/Pdf/2004/ChanningEdwards%202004%20Experimental%20taphonomy.pdf>.
- ²⁹ Borys M. Didyk and Bernd R.T. Simoneit (1989), "Hydrothermal Oil of Guaymas Basin and Implications for Petroleum Formation Mechanisms," *Nature*, 342:65-69, November 2.
- ³⁰ John Morris and Steven Austin (2003), *Footprints in the Ash* (Green Forest, AR: Master Books), pp. 74-76; "A Geologic Catastrophe" (2005), Glacial Lake Missoula and the Ice Age Floods, <http://www.glaciallakemissoula.org/story.html>; James O'Connor and Richard Waitt (1995), "Beyond the Channeled Scabland," *Oregon Geology*, 57[5]:100-103, <https://www.oregongeology.org/pubs/og/ogv57n05.pdf>; Michelle Roberts (2007), "Texas Set to Open New Canyon to Public," Canyon Lake Gorge, *The Associated Press*, October 5, https://www.canyonlakeguide.com/helpful_info/gorge.htm; Sigrid Sanders, et al. (2017), "Providence Canyon," *New Georgia Encyclopedia On-line*, July 26, <http://www.georgiaencyclopedia.org/articles/geography-environment/providence-canyon>.
- ³¹ Steve Reucroft and J. Swain (2009), "Ultrasonic Cavitation of Water Speeds Up Thorium Decay," *CERN Courier*, June 8, <http://cerncourier.com/cws/article/cern/39158>; Cf. DeYoung.
- ³² Ross Mitchell, David Evans, and Taylor Kilian (2010), "Rapid Early Cambrian Rotation of Gondwana," *Geology*, 38[8]:755-758; Paul Garner (2011), *The New Creationism* (Carlisle, PA: EP Books), pp. 187-189.
- ³³ Steven Austin and D. Russell Humphreys (1990), "The Sea's Missing Salt: A Dilemma for Evolutionists," *Proceedings of the Second International Conference on Creationism*, ed. R.E. Walsh and C.L. Brooks (Pittsburgh, PA: Creation Science Fellowship), 2:17-33.
- ³⁴ "Why Do We Have Oceans?" (no date), *National Ocean Service*, https://oceanservice.noaa.gov/facts/why_oceans.html.
- ³⁵ John Milliman and James Syvitski, "Geomorphic/Tectonic Control of Sediment Discharge to the Ocean: The Importance of Small Mountainous Rivers," *The Journal of Geology*, 100 (1992): 525-544.
- ³⁶ William Hay, James Sloan II, and Christopher Wold (1998), "Mass/Age Distribution and Composition of Sediments on the Ocean Floor and the Global Rate of Sediment Subduction," *Journal of Geophysical Research*, 93[B12]: 14,933-14,940.
- ³⁷ "Deep-Sea Sediments" (2018), *Encyclopaedia Britannica On-line*, <https://www.britannica.com/science/ocean-basin/Deep-sea-sediments>.
- ³⁸ NOTE: One ft³ wet gravel is approximately 126.1 pounds, and the surface area of the ocean is roughly 139 million square miles. The total weight of the sediment on the ocean floor is, therefore, 3.665(10¹⁷) tons.
- ³⁹ Steven Austin (1994), *Grand Canyon: Monument to Catastrophe* (Santee, CA: Institute for Creation Research), pp 42-43.
- ⁴⁰ Consider a child's helium balloon. The helium, being "slippery," gradually escapes the balloon, but it does so through the rubber itself, not through the knot at the base of the balloon.
- ⁴¹ DeYoung, pp. 65-78.
- ⁴² Rings of color that surround a radioactive mineral.
- ⁴³ DeYoung, pp. 93-95.
- ⁴⁴ Steven Austin and John Morris (1986), "Tight Fold and Clastic Dikes as Evidence for Rapid Deposition and Deformation of Two Very Thick Stratigraphic Sequences," *First International Conference on Creationism*, ed. R.E. Walsh, C.L. Brooks, and R.S. Crowell (Pittsburgh, PA: Creation Science Fellowship), pp. 3-13, <http://static.icr.org/i/pdf/technical/Tight-Fold-and-Clastic-Dikes-Rapid-Deposition-Deformation.pdf>.
- ⁴⁵ Danny Faulkner (2012), "#4 Faint Sun Paradox," *Answers Magazine On-line*, October 1, <https://answersingenesis.org/astronomy/sun/4-faint-sun-paradox/>.
- ⁴⁶ Eric McLamb (2011), "Earth's Beginnings: The Origins of Life," *Ecology On-line*, September 11, <http://www.ecology.com/2011/09/10/earths-beginnings-origins-life/>.
- ⁴⁷ D.R. Humphreys (2016), *Earth's Mysterious Magnetism and that of Other Celestial Orbs* (Chino Valley, AZ: Creation Research Society), p. 57.
- ⁴⁸ Earth's magnetic field strength is roughly 0.5 G at the surface, while a neutron star's magnetic field strength is at least 10⁸ G ["Earth's Magnetic Field" (2018), Harvard Natural Sciences Lecture Demonstrations, Harvard University, <https://sciencedemonstrations.fas.harvard.edu/presentations/earths-magnetic-field>; A. Reisenegger (2003), "Origin and Evolution of Neutron Star Magnetic Fields," *International Workshop on Strong Magnetic Fields and Neutron Stars*, <http://www.if.ufrgs.br/hadrons/reisenegger1.pdf>].
- ⁴⁹ David Powell (2007), "Earth's Moon Destined to Disintegrate," *Space.com*, January 22, <https://www.space.com/3373-earth-moon-destined-disintegrate.html>.
- ⁵⁰ Don DeYoung (2008), "Tides and the Creation Worldview," *Creation Research Society Quarterly*, 45[2]:100-108.
- ⁵¹ E.g., F.R. Stephenson, "Tidal Recession of the Moon from Ancient and Modern Data," *Journal of the British Astronomical Association*, 91:141, <http://adsbit.harvard.edu/full/seri/JBAA/0091/0000136.000.html>.
- ⁵² Larry Vardiman (1990), *The Age of the Earth's Atmosphere* (El Cajon, CA: Institute for Creation Research).
- ⁵³ Nola Taylor Redd (2013), "Spiral Galaxy Facts & Definition," *Space.com*, August 15, <https://www.space.com/22382-spiral-galaxy.html>.
- ⁵⁴ Calla Cofield (2017), "Oldest Spiral Galaxy Ever Seen May Reveal Secrets About the Milky Way," *Space.com*, November 7, <https://www.space.com/38690-oldest-spiral-galaxy-ever-seen-detected.html>.
- ⁵⁵ Redd, emp. added.
- ⁵⁶ "Solar System Profile" (2018), *ThePlanets.org*, <https://theplanets.org/solar-system/>.
- ⁵⁷ Charles Choi (2017), "Comets: Facts About the 'Dirty Snowballs' of Space," *Space.com*, October 23, <https://www.space.com/53-comets-formation-discovery-and-exploration.html>.
- ⁵⁸ "How Long Does it Take for Comets to 'Melt'?" (2013), *TheNakedScientists.com*, April 4, <https://www.thenakedscientists.com/articles/questions/how-long-does-it-take-comets-melt>.

SPEAKING SCHEDULES

Kyle Butt

January 6	Wetumpka, AL	(334) 567-6561
January 13	Spring Hill, TN	(615) 294-1453
January 25-27	Port Lavaca, TX	(361) 552-9551

Eric Lyons

January 25-27	Gainesboro, TN	(931) 858-7460
---------------	----------------	----------------

Dave Miller

January 6, 13	Montgomery, AL	(334) 264-2985
January 25-27	Bell Buckle, TN	(219) 671-0561

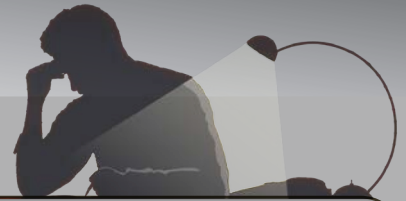
Jeff Miller

January 13	Kissimmee, FL	(407) 423-4301
January 21	Lakeland, FL	(863) 683-4043
January 25-27	Lubbock, TX	(806) 795-4377



NOTE FROM

The Editor



2018 Bound Volumes

For many years, we have arranged for our two monthly journals to be placed into a beautifully bound volume to enable readers to store their past issues on a shelf. The bound volumes for 2018 have arrived in our offices and are now available for purchase. These bound volumes provide a convenient assemblage of all 12 issues published for the year. The bound volume of *Reason & Revelation* for 2018 contains articles on such topics as:

- Did Paul Endorse Slavery?
- Babel: More Historical Confirmation of the Bible
- Falcons, Guided Missiles, and God
- The Teleological Argument for the Existence of God
- “The Sun Stood Still”—Really?
- If “the Life of the Flesh is in the Blood,”
is Conception When Life Begins?
- Bible Inspiration: The Crucifixion Clothes
- Jephthah’s Daughter and Symbolic Sacrifices
- Making a Brief Case **Against** Evolution
and **For** Creation to the School Board
- The Isaiah Seal
- Introduction to Christian Evidences for Christians
- Bats Go Viral and Moses “Called” It
- Do Science and Scripture Harmonize?
Yes (Obviously)
- God, Abraham, & Child Sacrifice
- What About Those Who Never Hear the Gospel?
- Letting the Bible Explain Itself
- Should Jesus Only Be Called “Yeshua”?
- Baptism and the Greek of Matthew 28:19-20
- Science and the Bible
- Where Did “Jehovah” Come From?
- “Separation of Church and State”?
- Do Visions Still Occur?

And much, much more.

Also now available is the 2018 bound volume of *Discovery*, our monthly magazine on Scripture and science for children. During 2018, *Discovery* contained articles on these timely topics: The God-Approved View of Animals; Islam; The Earth and Moon; Parables of Jesus; Dinosaurs; Biomimicry; Beauty; Archaeology and the Bible; Science and the Bible; God and Money; Evolutionary Dating Methods; and the Flood.

As always, these beautifully bound annual collations include an author/title index and an attractive cover. Bound volumes sell for \$14. Previous volumes of *R&R* from 1998-2017 (excluding 2016) are still available at \$5 each. Previous volumes of *Discovery* from 1999-2017 (excluding 2001-2003) are still available also at half price.

Have you given some thought to donating bound volumes of *Reason & Revelation* and *Discovery* to personal, church, or school libraries? They also make valuable gifts for children, men who are attending a preacher-training school, or students in college (especially those majoring in either Bible- or science-related fields). Why not consider giving a single volume (or, better yet, an entire set) to someone for their future study and edification?

Dave Miller

See Center Spread
for More Details